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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,191	10/13/2005	Shingo Hishiya	279088US26PCT	2212
22850	7590	03/14/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER PATEL, REEMA	
			ART UNIT	PAPER NUMBER
			2812	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/14/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

10/553,191

Applicant(s)

HISHIYA, SHINGO

Examiner

Reema Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/13/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 10/13/05. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

### ***Specification***

3. The disclosure is objected to because of the following informalities: On page 10, line 23 the letter 'n' is missing from the word 'given'. Appropriate correction is required.

### ***Claim Objections***

4. Claim 12 is objected to because of the following informalities: The letter 'd' is missing from the word 'configured'. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 7-9, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al (2002/0045361).

7. Regarding claim 1, Cheung et al discloses the following claimed elements:

- A method for processing an organosiloxane film, the method comprising:
  - loading a target substrate into a reaction chamber ([0045],[0049])
  - performing a heat process on the target substrate within the reaction chamber to bake the coating film, wherein the heat process comprises
    - a temperature setting step of setting an interior of the reaction chamber at a process temperature by heating ([0045],[0050])
    - a supplying step of supplying a baking gas into the reaction chamber set at the process temperature, while activating the baking gas by a gas activation section disposed outside the reaction chamber ([0045],[0052])

8. Yet, Cheung et al does not disclose that the substrate contains the coating film before loading into the reaction chamber. Rather, Cheung et al suggests loading the substrate into the reaction chamber and then depositing the polysiloxane base solution having an organic functional group ([0045]).

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to deposit the film onto the substrate before loading into the reaction chamber because selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results. In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946). The applicant has not provided any new or unexpected results nor has stated any criticality for coating the wafer and then loading into the reaction chamber.

9. Regarding claim 2, Cheung et al discloses a process temperature in a range from 250 to 400 °C.
10. Regarding claim 3, Cheung et al discloses the gas activation section is configured to activate the baking gas by means of plasma ([0052]).
11. Regarding claim 4, Cheung et al discloses that the baking gas is dinitrogen oxide gas ([0045]).
12. Regarding claim 7, Cheung et al discloses the following claimed elements:
  - An apparatus for processing an organosiloxane film, by performing a heat process on a target substrate with a coating film formed thereon to bake the coating film, the coating film comprising a polysiloxane base solution having an organic functional group, the apparatus comprising:
    - a reaction chamber configured to accommodate the target substrate ([0049])
    - a temperature adjusting section configured to adjust temperature inside the reaction chamber ([0050])
    - a gas supply section configured to supply a baking gas into the reaction chamber ([0049])
    - a gas activation section disposed outside the reaction chamber and configured to activate the baking gas ([0052])
    - an exhaust section configured to exhaust gas inside the reaction chamber ([0051])

- control section configured to control the temperature adjusting section, the gas supply section, the gas activation section, and the exhaust section ([0057])

13. Regarding claim 8, Cheung et al discloses that the gas activation section is configured to activate the baking gas by means of plasma ([0045], [0052]).

14. Regarding claim 9, Cheung et al discloses that the baking gas is dinitrogen oxide gas ([0045]).

15. Regarding claim 12, Cheung et al discloses that the control section is configured to execute all of the actions of the reaction chamber ([0057]).

16. Regarding claim 13, Cheung et al discloses that the process temperature ranges from 250 to 400 °C ([0045]).

17. Claims 5-6 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al (2002/0045361 A1) as applied to claim 1 above, and further in view of Haluska et al (4,847,162).

18. Regarding claim 5, Cheung et al discloses the limitations of claim 1 and suggests that the baking gas is supplied with energy from plasma ([0045]). Yet, Cheung et al does not disclose activating the baking gas by bringing it into contact with a catalyst. However, Haluska et al discloses that a catalyst can be added to the polysiloxane base solution coating to enhance the coating's oxidation and curing (Col 4 lines 18-24). During oxidation and curing when the baking gas is added to the reaction chamber, the baking gas comes into contact with the catalyst added to the base coating.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Cheung et al by activating the baking gas by having it come into contact with the catalyst added to the base coating, as suggested by Haluska et al, to enhance oxidation and curing.

19. Regarding claim 6, Haluska et al discloses that the catalyst can be platinum (col 4, lines 19-24).

20. Regarding claim 10, Cheung et al discloses the limitations of claim 7 and suggests an apparatus in which baking gas is supplied with energy from plasma ([0045]). Yet, Cheung et al does not disclose an apparatus that activates the baking gas by bringing it into contact with a catalyst. However, Haluska et al discloses that a catalyst can be added to the polysiloxane base solution coating to enhance the coating's oxidation and curing (col 4, lines 18-24). During oxidation and curing when the baking gas is added to the reaction chamber, the baking gas comes into contact with the catalyst added to the base coating.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Cheung et al by activating the baking gas by having it come into contact with the catalyst added to the base coating, as suggested by Haluska et al, to enhance oxidation and curing.

21. Regarding claim 11, Haluska et al discloses that the catalyst can be platinum (col 4, lines 19-24).

### ***Double Patenting***

22. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

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unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

23. Claims 1-13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of copending Application No. 10/487,935 (hereinafter '935). Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference is that the instant application uses a catalyst selected from the group consisting of tungsten, platinum, and titanium oxide.

24. While the instant application uses a metal catalyst, '935 uses a catalytic agent gas selected from the group consisting of dinitrogen oxide and hydrogen. However, since both substances are and act as catalysts, the examiner takes note that the use of a metal catalyst is an obvious variation of the use of a catalytic agent gas.

25. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.



***Conclusion***

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chandra et al (U.S. 5,789, 325) discloses a method of processing an organosiloxane film by heating in an oxidizing environment. Chandra et al (U.S. 5,262,201) discloses a method of processing an organosiloxane film by heating in an oxidizing environment.

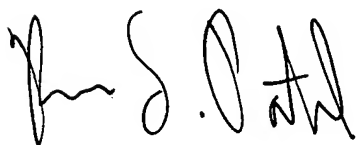
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reema Patel whose telephone number is 571-270-1436. The examiner can normally be reached on M-Th, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on 571-272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

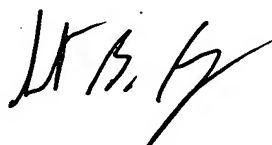
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RSP

A handwritten signature in black ink, appearing to be "RSP" followed by a stylized flourish.

SCOTT B. GEYER  
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to be "S.B. Geyer" followed by a stylized flourish.

3/2/07